

June 28, 2004

Mr. Philip A. Shucet  
Commonwealth Transportation Commissioner  
1401 E. Broad Street, Third Floor  
Richmond, Virginia 23219

Dear Commissioner Shucet:

The I-495 PPTA Advisory Panel recommends that you enter into negotiations with Fluor Daniel for a Comprehensive Agreement for improvements to I-495 from the American Legion Bridge to the Springfield Interchange, including the development of four high-occupancy toll lanes (HOT lanes). This recommendation is based on several findings and conditions listed below. Those findings and conditions are in turn based on the criteria contained in the implementation guidelines for the Public Private Transportation Act of 1995, the Code of Virginia, presentations made to, and information received by, the Advisory Panel, local and regional government comments, and general public comments.

### **Background**

From 1987 to 1989, the Northern Virginia region completed its first-ever regional long-range plan for transportation. This 2010 Plan included the completion of an HOV network throughout the region as one of the major priorities of the region. (See Attachment A)

From 1995 to 1997, the Virginia Department of Transportation conducted a Major Investment Study of the I-495 corridor. During this period, the Commonwealth Transportation Board allocated more than \$250 Million to I-495 improvements. These allocations were intended to support the two recommended investment strategies that grew out of the Major Investment Study process:

- Highway improvements that support HOV and express bus service.
- Rail transit planning in other corridors to increase connections among existing radial lines. (See Attachment B)

From 1997 to 1999, the Northern Virginia Transportation Coordinating Council completed a major update and enhancement of the 2010 Plan—the Northern Virginia 2020 Transportation Plan. Over the preceding decade, radial extensions and enhancements to the HOV network had been funded and completed in the I-95, I-66, and

Dulles Toll Road corridors. However, connectivity among those radial extensions, through improvements to I-495, had not been achieved. The adopted 2020 Plan continued to include completion of a regional HOV network, through HOV improvements to the I-495 corridor, as one of the major priorities of the region. (See Attachment C)

From 1999 to 2001, the Department of Rail and Public Transportation completed its Capital Beltway Corridor Rail Feasibility Study. The study reviewed five rail alternatives in the corridor and recommended that a formal alternatives analysis be conducted for the corridor, alongside other major rail corridors in the region. The study also called for better coordination of transit and land use planning. The Advisory Panel received a briefing on the study from the Department of Rail and Public Transportation. (See Attachment D)

From 1998 to the present, the Virginia Department of Transportation has conducted an environmental review of potential improvements to the I-495 corridor. The initial set of alternatives included (1) a ten-lane, concurrent HOV lane proposal, (2) a twelve-lane, barrier-separated HOV facility proposal, (3) a ten-lane, express/local configuration with HOV lanes, and (4) a no-build option. Public hearings were held in the Spring of 2002, attended by over 900 individuals and generating over 2000 comments. Many of those comments related to the physical impacts of the candidate build alternatives, particularly around the proposed interchange improvements. In addition, Fairfax County requested consideration of one or more HOT lane alternatives as part of a final Environmental Impact Statement (See Attachment E). The Virginia Department of Transportation is currently evaluating modifications to the candidate build alternatives to reduce potential physical impacts, as well as evaluating the feasibility and effectiveness of HOT lanes in the corridor. A final Environmental Impact Statement should be completed in late 2004 or early 2005. (See Attachment F)

In June of 2002, Fluor Daniel submitted an unsolicited, conceptual proposal to the Virginia Department of Transportation under the Public Private Transportation Act of 1995 and its implementation guidelines. Fluor Daniel proposed improving fourteen miles of I-495 from the American Legion Bridge to the Springfield interchange by adding four HOT lanes (two in each direction) and other related improvements. Fluor Daniel also proposed four optional elements, in addition to the base proposal: toll system operation and maintenance; long-term facility maintenance; additional direct ramp access points; and system expansion to the east, including the construction of Phase VIII of the Springfield interchange. In July of 2003, an Initial Review Committee composed of Department staff recommended that the Fluor Daniel proposal be advanced to a detailed stage of review. The Commonwealth Transportation Board concurred with that recommendation at its July 2003 meeting. (See Attachment G)

In July of 2002, Mr. Patrick DeCorla-Souza prepared “An Evaluation of Toll Options Using Quick-Response Analysis Tools: *A Case Study of the Capital Beltway.*” This paper was prepared for consideration by the Transportation Economics Committee

of the Transportation Research Board. The paper concluded that pricing alternatives can often accomplish the purpose of a major highway project more efficiently and more effectively than conventional alternatives that exclude pricing, while generating net revenue surpluses to support project construction, and to fund improved transit and paratransit services (See Attachment H). A revised paper was published in March of 2003.

In October of 2003, Fluor Daniel submitted a detailed proposal for consideration by an Advisory Panel and the Commonwealth Transportation Commissioner. Both the detailed and the conceptual proposals have been sent to you under separate cover.

Should VDOT enter into negotiations with Fluor Daniel for this project, the following actions would be required before construction could begin:

- NEPA Approval by the Commonwealth Transportation Board and Federal Highway Administration
- Investment-Grade Toll Revenue Study by Fluor Daniel
- Formal Designation of I-495 as HOT Lanes by Commonwealth Transportation Board
- Revised Value Pricing Agreement Between VDOT and Federal Highway Administration
- Inclusion in Constrained Long Range Plan and Conforming Air Quality Plan by Metropolitan Washington Transportation Planning Board
- Comprehensive Agreement Between VDOT and Fluor Daniel
- Detailed Financial Plan Between VDOT and Federal Highway Administration
- Design-Build Agreement Between VDOT and Fluor Daniel

### **Findings of the Advisory Panel**

- The Fluor Daniel team and proposal meet the implementation guidelines criteria for qualifications and experience. This finding incorporates evaluations of the project team's experience, its ability to perform, its leadership structure, project manager and management approach, the financial condition of Fluor Daniel, and the Fluor Daniel consideration of small and minority contractors, as well as competitive opportunities for subcontractors. (See Attachment I, pages 3 to 5)
- The Fluor Daniel proposal meets the implementation guidelines criteria for technical project characteristics. This finding incorporates evaluations of the project definition, schedule, operation and proposed technology; conformity with applicable state and federal laws, regulations and standards, including environmental standards, and state and local permitting requirements; rights-of-way acquisition requirements; and long-term maintenance requirements. Several presentations to the Advisory Panel stressed the requirement that **any**

improvements to this corridor be part of a federally-approved NEPA document and a regional air quality conformity analysis. (See Attachment I, pages 5 to 10)

- The Fluor Daniel proposal meets some of the implementation guidelines criteria for project financing, including financing, financial plan, cost estimation, life cycle costs, and business objectives. (See Attachment J) Additional traffic and revenue analysis is needed to make a final determination. However, the Advisory Panel expressed significant concern with three major risk factors:
  - The project scope, and its attendant costs, may increase to address safety and congestion issues. One illustrative scenario prepared by VDOT staff showed these modifications adding approximately \$112 million to the Fluor base cost of \$693 million. For planning purposes, the estimated project cost is \$825 to \$850 million.
  - HOV and transit usage in the corridor may exceed projections, potentially reducing project revenues and increasing the need for public sector financial support. A sketch level assessment performed by the staff of the National Capital Region Transportation Planning Board found that HOV volumes of 1,600 vehicles per hour, or more, could be expected on some sections during peak periods. This level of HOV usage would require approximately half of the available capacity proposed by the Fluor team.
  - The average trip may be relatively short. Both TPB staff and the Fluor proposal assumed that about 50% of the Beltway trips would be one or two interchange segments in length. Predicting toll revenues under these conditions will pose a unique challenge for both the private and the public sectors.
- The Fluor Daniel proposal meets the implementation guidelines criteria for public support. This finding incorporates evaluations of the community benefits, community support, and public involvement. (See Attachment I, pages 8 and 9)
- The Fluor Daniel proposal meets the implementation guidelines criteria for project compatibility. This finding incorporates evaluations of the compatibility of the proposal with existing systems, applicable policies and goals, system-wide enhancement, local, state, and regional plans, and economic development. Of particular importance to this finding are the formal comments of Fairfax County on the proposal. (See Attachment I, pages 9 and 10, and Attachment K)
- Construction of Phase VIII of the Springfield Interchange project is necessary for the proper functioning of both HOT and general-purpose lanes on I-495, as well as HOV and general-purpose lanes on I-95/I-395. In addition, the Phase VIII segment would be a critical link in a regional network of HOT lanes.

- Planning and design of the ultimate HOT lane facility must carefully integrate transportation and land use goals, particularly for the location, design, and operation of the intermediate access points, as well as the local highway network. Many of the base proposal slip ramps will need to be upgraded to the optional direct access points. The HOT lane planning and design processes must involve stakeholders and local technical staff conversant in both transportation and land use issues at specific locations in the corridor.
- Planning and design of the ultimate HOT lane facility must be compatible with the long-term plans of Maryland for the I-495 corridor, particularly for the northern terminus of the project. The northern terminus of the project may need to be constructed in phases to manage congestion and provide a seamless link to Maryland. The HOT lane planning and design processes must involve appropriate Maryland technical staff.
- The congestion pricing approach in the I-495 corridor must promote greater HOV and transit usage in the corridor and throughout the region. Nearly two decades of regional planning have highlighted the importance of a connected HOV network in Northern Virginia. While the Fluor Daniel Proposal would provide the basic infrastructure for a connected HOV network, the application of congestion pricing must reinforce the longstanding regional commitment to increased HOV and transit usage. The sketch level assessment performed by staff of the National Capital Region Transportation Planning Board cited the need to “remove the current disincentive to Fluor Daniel for serving non-paying users like HOV3+.”
- While a non-compete clause may be an essential element in the adopted financial plan, any such clause must be as narrowly drawn as possible and subject to appropriate comment and review prior to any final agreement. The Virginia Department of Transportation cannot and should not compromise its ability to make necessary safety and capacity improvements in the corridor. Long term transit and HOV improvements in the region should be similarly protected. The Department and Fluor Daniel may find it advantageous to restrict future SOV mainline capacity expansions on I-495.
- The Fluor Daniel proposal likely will need to be modified to accommodate additional sound walls and to preserve trail connections in the corridor. In negotiating these issues, the Virginia Department of Transportation should be guided by Federal Highway standards for noise wall placement and the Fairfax County Comprehensive Plan for bicycle and trail connections.
- In sum, the Fluor Daniel proposal is found to be consistent with Section 56-573.1 of the Code of Virginia. This section of the Code requires that a finding that a proposal is “likely to be advantageous to the responsible public entity and the public based on (i) the probable scope, complexity or urgency of a project or (ii)

risk sharing, added value, and increase in funding or economic benefit from the project that would not otherwise be available.”

### **Recommendations of the Advisory Panel—Comprehensive Agreement**

The I-495 Advisory Panel recommends that you enter into negotiations with Fluor Daniel for a Comprehensive Agreement for improvements to I-495 from the American Legion Bridge to the Springfield Interchange, including the development of four HOT lanes, subject to the following conditions:

1. The Advisory Panel recommends that the Comprehensive Agreement clearly describe the requirements of the NEPA process and clearly provide that the Comprehensive Agreement, or any subsequent design-build agreements, should not be implemented if they are inconsistent with the final environmental document. The Advisory Panel also recommends that the Comprehensive Agreement should clearly provide that if the Comprehensive Agreement cannot be implemented due to NEPA requirements, the costs incurred by Fluor Daniel for developing and negotiating the PPTA proposals should be borne by Fluor Daniel and not subject to reimbursement.
2. The Advisory Panel recommends that the first phase of the Comprehensive Agreement include a requirement for an investment-grade traffic and revenue analysis. Such an analysis must address the three major risk factors identified earlier in this letter by the Advisory Panel. Further, the development and finalization of this analysis should be conducted in a collaborative, consultative, and transparent manner. Technical staff from affected local and regional institutions should be involved in the initiation, review and acceptance of the analysis. Transparency and public review of any congestion pricing or tolling program is an essential ingredient in building public support and understanding of the HOT lanes concept. Finally, the Comprehensive Agreement should clearly provide that Fluor Daniel is responsible for the entire cost of the investment-grade traffic and revenue analysis unless a design-build agreement is executed and financial closing has occurred on the project financing.
3. The Advisory Panel recommends that the negotiation, development, and implementation of the design-build phase of the Comprehensive Agreement actively involve appropriate external technical staff from the region. A collaborative, consultative, and transparent process in the location, design and construction of the HOT lane facilities, particularly the intermediate access points and the northern terminus, is essential to ensure the successful operation of the HOT lanes and their successful integration with Fairfax County land uses, the local highway network, and planned improvements to the Maryland segment of the I-495 corridor.

4. The Advisory Panel recommends that, if necessary, any non-compete clause be as narrowly drawn as possible. A collaborative, consultative and transparent process in the development and acceptance of any non-compete clause is an essential ingredient in building public support and understanding of the HOT lanes concept.
5. The Advisory Panel recommends that sound walls be developed in accordance with NEPA requirements and that trail connections and crossings be developed in accordance with the Fairfax County Comprehensive Plan.
6. The Advisory Panel recommends that transit and HOV be integral components of the project planning and design. The Advisory Panel further recommends that the design and operation of the HOT Lane facility allow for its classification as a “fixed guideway transit” facility for purposes of Federal Transit Administration funding determinations.

#### **Recommendations of the Advisory Panel—Other Issues**

The above recommendations relate directly to the negotiation and implementation of a Comprehensive Agreement for improvements to the I-495 corridor. The Advisory Panel offers the following additional recommendations for consideration by the Commissioner, the Commonwealth Transportation Board, and others:

1. The Advisory Panel recommends that Phase VIII of the Springfield Interchange project be a major funding priority of the region and the Commonwealth. These improvements are a critical link in any regional HOT or HOV network, whether they are part of a HOT lane Comprehensive Agreement or a more traditional programming decision.
2. The Advisory Panel recommends that the Commonwealth Transportation Board, the Department of Transportation, and the many interests of Northern Virginia continue to evaluate the likelihood, costs, and benefits of a HOT lane network in Northern Virginia. Of most immediate concern would be the development of a regional congestion pricing structure that promotes transit and HOV usage throughout the region and that avoids disincentives to HOV and transit usage.

It is our hope that these recommendations will be helpful to you in your deliberations and decision making. Enclosed with this letter are two letters from Advisory Panel members highlighting their individual concerns and questions. Should you wish the Advisory Panel to re-convene, due to changed circumstances or additional inquiries, we would be happy to do so.

It is my pleasure to sign this letter on behalf of the Advisory Panel, and I appreciate the opportunity to work with each member of the Panel to improve the quality of life in the Commonwealth.

Sincerely,

Pierce R. Homer  
Advisory Panel Chair

Attachments

- Advisory Panel Membership
- Individual Letters
- Attachments A through I

CC: Secretary Clement  
Ms. Karen Rae  
Advisory Panel  
Mr. Herb Morgan  
Mr. William Thomas, Esq.



June 11, 2004

Mr. Philip A. Shucet  
Commissioner  
Virginia Department of Transportation  
1401 E. Broad Street  
Richmond, Virginia 23219

Dear Philip:

***Regarding the I-495 HOT Lane Advisory Panel Recommendations***

After six months of probing the proposal's proponents for answers to a number of questions that still have not been satisfactorily addressed, I reluctantly dissent from the apparent majority on this panel and recommend that instead of proceeding any further with this proposal, you return it with our thanks and appreciation. As discussed below, no one yet knows how a HOT Lane network in Northern Virginia would look, or how much it would cost, or how it would be paid for. We need to know all this before making a decision about the Beltway piece of it.

I propose that you encourage the Transportation Research Council to expedite its study of a HOT lane network in Northern Virginia, that you examine and consider the results of the NEPA study due later this year, and that you and the CTB come to some clarity about exactly what we want to do along the Beltway before committing the state's - or anyone else's - money. With the results of these studies and deliberations, we will be able to develop a comprehensive plan, adequate funding, and a commitment to proceed. At that point, VDOT could add such projects to the Six Year Improvement Plan and begin the process of soliciting PPTA proposals to implement whatever the Commonwealth has decided to do.

There are several problems with the current proposal:

**It is expensive, and the more we look into it the more expensive it gets.** At the conclusion of our May 20, 2004 meeting, VDOT's chief engineer for programs stated that it would cost at least \$850 million to do what is minimally necessary to ensure safe and timely travel on I-495. It is anticipated that 13% of this amount, or \$110 million, will come from the Commonwealth. This is money that we do not now have and do not expect to have any time soon.

**Most travelers on the Beltway get on at one entrance and get off at the next.** This is the conclusion of the study prepared by one of our panel members, and it has not been disputed by anyone. Is building two HOT lanes in each direction for the entire Virginia segment of the Beltway the best way to address this driving pattern? We should at least consider freeing up lanes for local traffic by building one limited access HOT lane in

each direction to accommodate long distance travelers and "destination drivers" (such as those heading to Dulles or to Tyson's). No one has looked into this approach.

**The financial plan has a \$200 million hole in it.** Your chief financial officer said at the April 1 meeting that the numbers don't add up and that neither she nor her staff nor her consultant could make sense of them. Subsequently, after two months of negotiation and analysis, she concluded that there is a \$200 million hole remaining. We cannot go forward on this basis.

**Public transit is not actively analyzed or specified.** One of the reasons proffered for this project was its public transit benefits. Yet, no provision has been made for dedicated entrances/exits from HOT lanes to Beltway exits. Public transit must have reliable schedules to attract a user base. I see no evidence that the transit component has been thought through or planned out.

**The project depends on other transportation projects being completed.** Phase VIII of the Springfield Interchange is critical to this project, but no one knows at this time when Phase VIII will be built.

**I would recommend you not agree to any kind of non-compete clause.**

I do not concur in the panel recommendation that Phase VIII of the Springfield Interchange be a major statewide funding priority. It may very well be a regional priority, but this panel's work is confined to evaluating the I-495 HOT lane proposal, not in recommending statewide priorities.

Sincerely,

Gerald P. McCarthy

CTB Member, Richmond

July 2, 2004

MEMORANDUM

TO: Philip A. Shucet, Commissioner

FROM: Barbara W. Reese, Chief Financial Officer

SUBJECT: Support of I-495 PPTA Advisory Panel Recommendation

As a member of the I-495 PPTA Advisory Panel, this letter will summarize concerns with the financial feasibility of Fluor Daniel's proposal. I did not agree with the Panel's recommendation to move the project to negotiation because of these concerns. As a result of these concerns, I recommend that the proposal not proceed to negotiation or that the proposal stay with the Panel until such time as the final Environmental Impact Statement (EIS) and more detailed traffic and revenue analysis by Fluor Daniel are completed. The EIS will be complete within the next eight months.

The Public-Private Transportation Act of 1995 Implementation Guidelines outline a number of financial considerations that are to be considered by the Panel, including:

- Has the proposer provided a financial plan and financial guarantees which will for access to the necessary capital to finance the facility?
- Does the financial plan demonstrate a reasonable basis for funding project development and operations? Are the assumptions on which the plan is based well defined and reasonable in nature?
- Are the planned sources of funding and financing realistic?

As proposed, the base price of Fluor Daniel's is \$693.4 million. At this time, it is not a fixed price, it does not include on-going maintenance and operations, nor toll collection and operations expenses for the base concept. The three sources of proposed funding are 1) public sector support, 2) toll revenue bonds, and 3) a TIFIA loan. All three sources have questions surrounding them that cannot be resolved at this time.

First, the proposal assumes that the public sector will provide \$91 million in funding in the first years of the project; however, this public sector funding has not been identified. From the Commonwealth's perspective, the current financial outlook does not include a mechanism for reasonably assuring it will be available. Critical to the success of the project is construction of Phase VIII of the Springfield Interchange, which is also currently not funded. Second, the toll revenue assumptions are high because no ramp up period has been assumed. Therefore, the toll revenues will not be sufficient in the early years of the project as proposed.

The proposal assumes a TIFIA loan of \$246 million. Based on the federal requirements regarding debt service coverage, there is no capability to increase the size of this loan and meet the requirement. As was discussed with Fluor Daniel by the panel on several occasions, a more detailed and refined traffic and revenue study should be completed to determine what options exist to the proposer for generating additional revenue from the proposed project.

Related to the traffic and revenue study are two additional issues. First, HOT lanes have not been implemented anywhere with the number of access points proposed in the based study. As you read through the additional materials and the recommendation letter from Chairman Homer, be mindful of comments such as “additional access”, “direct access”, and “slip ramps not adequate”. Each of these comments translates to additional costs and potentially additional congestion for relatively short trip lengths.

Second, both Fluor Daniel’s traffic assessment and the sketch level assessment by the Transportation Planning Board raise issues of how many paying customers will actually be able to use the HOT lanes based on predicted HOV users who will use the HOT lanes for free. According to the Board’s recent analysis, at least one lane will be consumed during peak hours with non-paying vehicles. Whether sufficient revenue can be generated (i.e., higher tolls paid by users) needs to be determined in more detailed traffic and revenue studies. While the capability will exist to increase the toll, the critical questions are what will be the benefit to the consumer and will that benefit be enough? A more detailed traffic and revenue study is required to determine both impacts.

The final Environmental Impact Statement will provide clear guidance on whether HOT lanes are a viable improvement for I-495 and what other improvements should be included. As noted in the letter from Chairman Homer, an illustrative set of modifications to the Fluor Daniel proposal added an additional \$112 million in costs. Chairman Homer’s letter also states that additional sound walls and trail connections will be required. These items also raise the cost of the project. The proposal identifies no viable method of financing any additional cost at this time.

If you have additional questions or need additional financial information, please let me know.